

Callander Community Hydro Ltd



May 2018

Robert Allen – Operations director

Don't Complain about the Rain

Operational Issues



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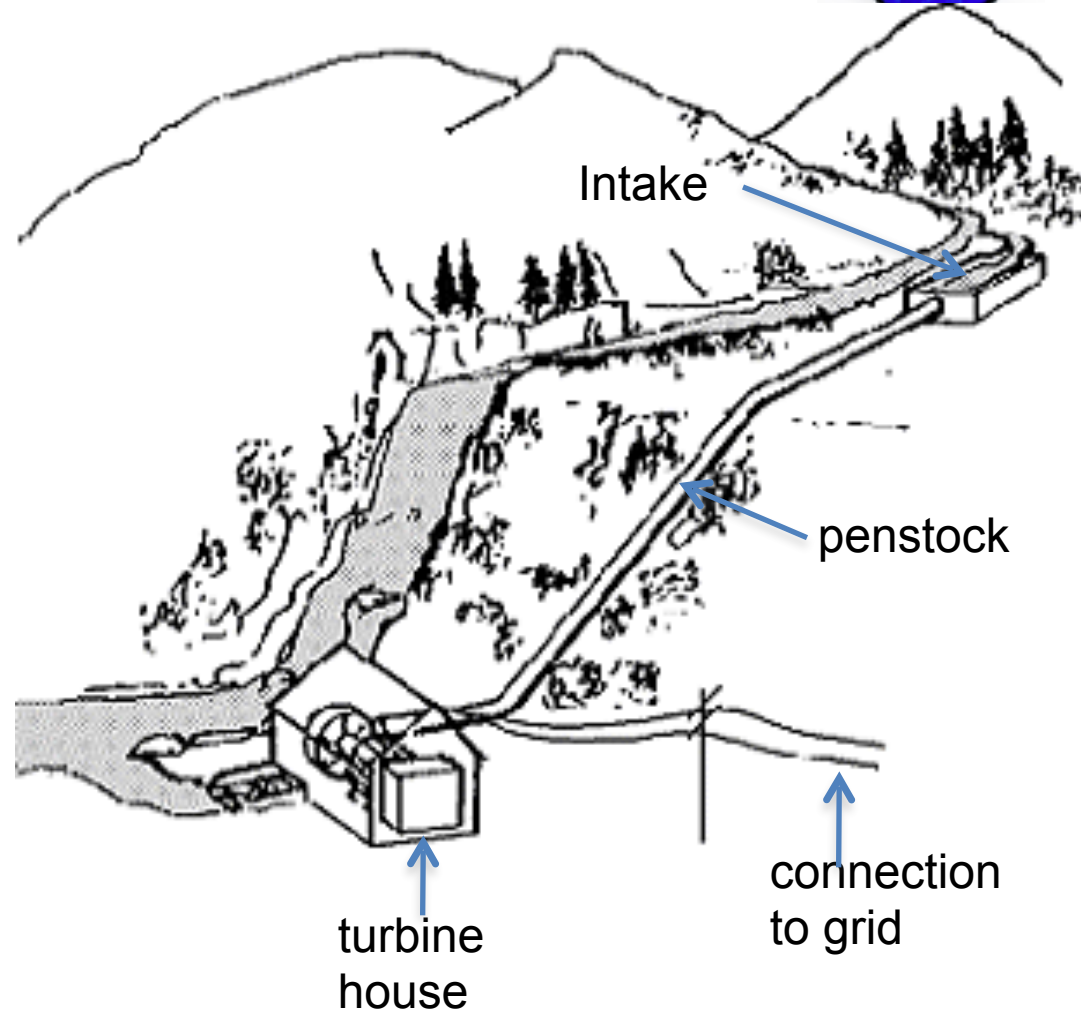
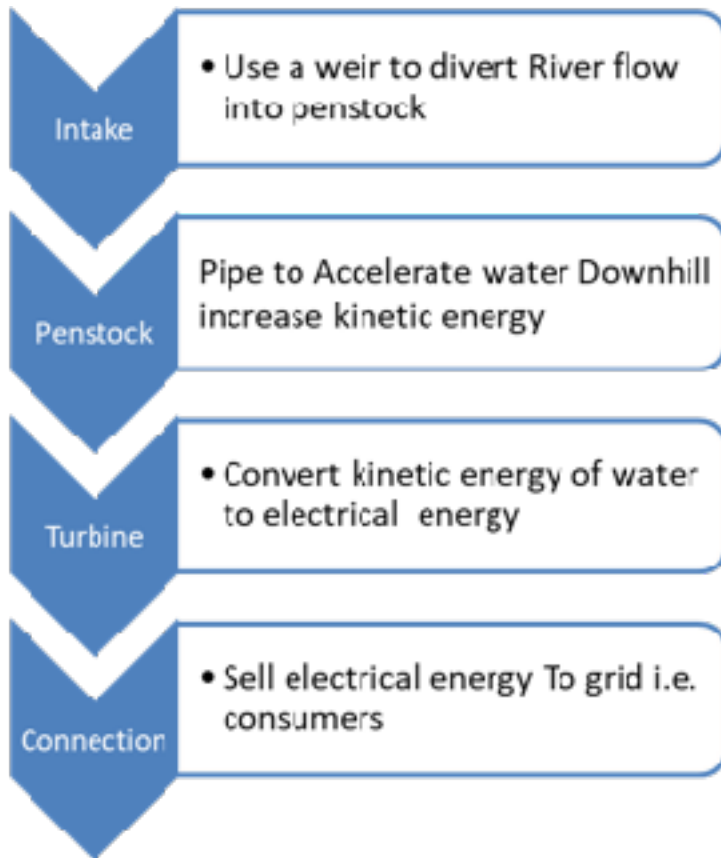
Project Headlines



- Small run of the river hydro scheme - 425 Kw
- On land leased from Forestry Commission Scotland
- Income via FIT's and on wholesale power market
- Donating all the profit to CCDT
- Scheme completed Sept 2014
- Completed on time within budget (£1.7 M)
- Borrowed £2.1 M pay down expensive debt
- £1.23 Million turnover since commissioning

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Run of river scheme



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Time Line



2009 – Feasibility Studies



2010 – Set Up Project Team



2011 - FCS Negotiations



2012 – PM & Specialists



2012 – Planning Approval

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Time Line



2013 - Grid, FITs, Turbine, Tender

April 2014 – Financial Close

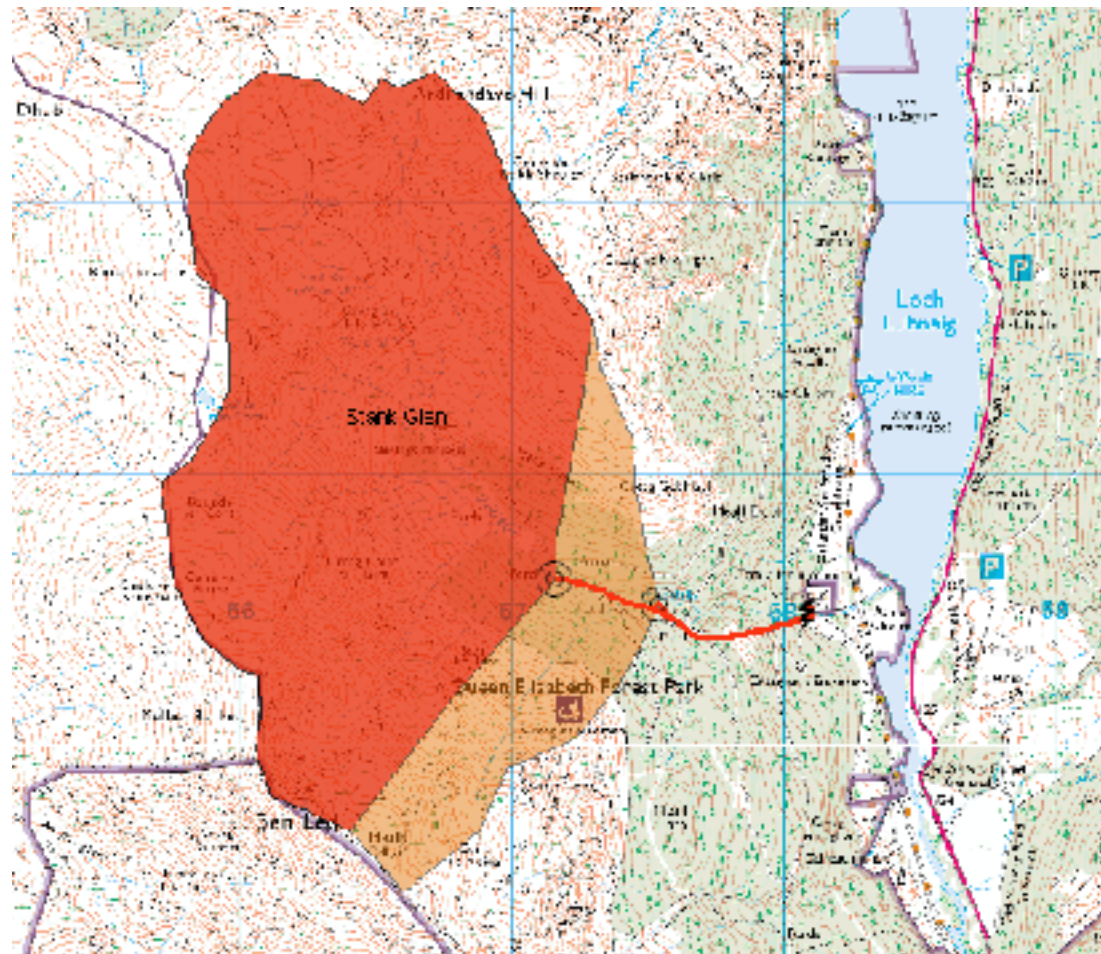
Sept 2014 – Build Complete

Sept 2014 – Full FIT Accreditation

2015 – Volunteer Team

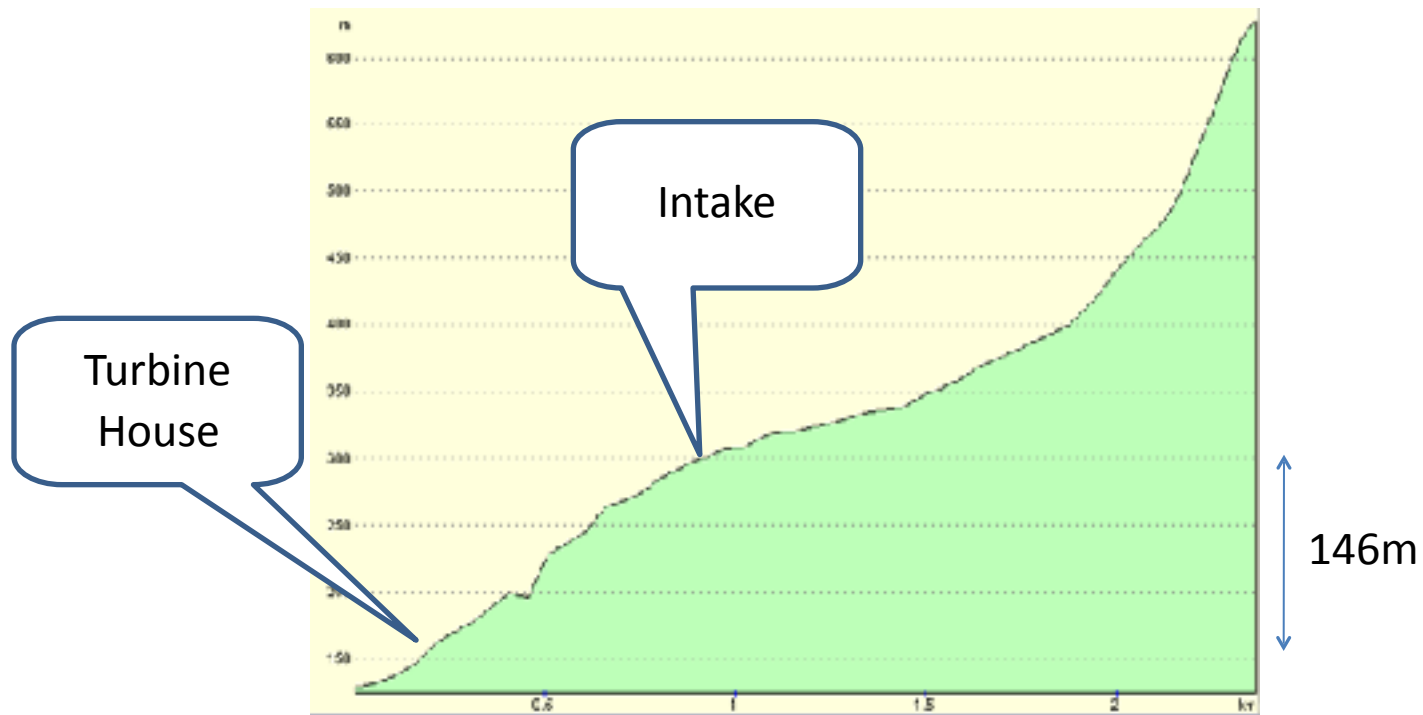
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Map of Catchment Area 4.23km²



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Stank Burn Vertical Profile

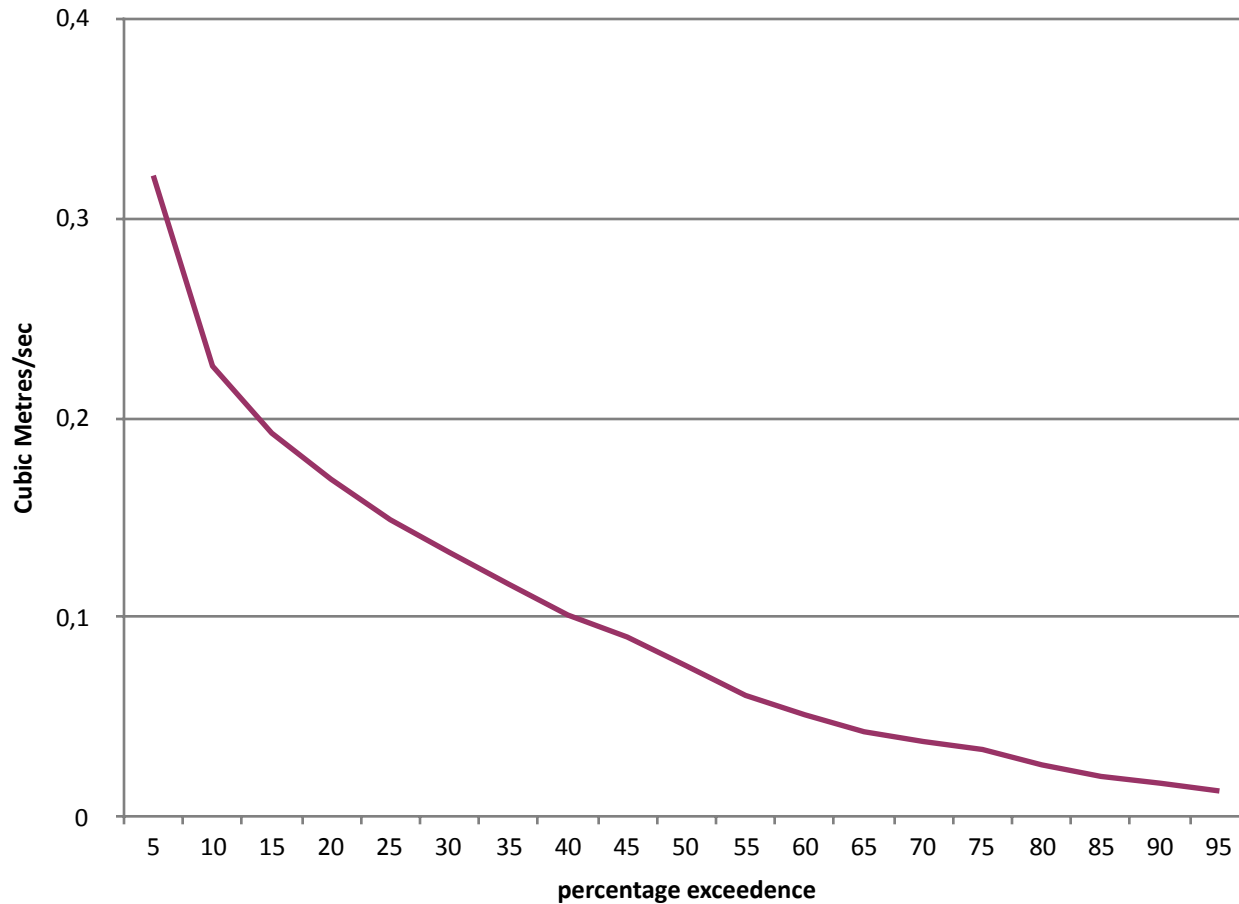


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Flow Monitoring



Stank Glen Flow Duration Curve



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The intake



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Burying Pipe on corrie lip



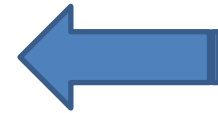
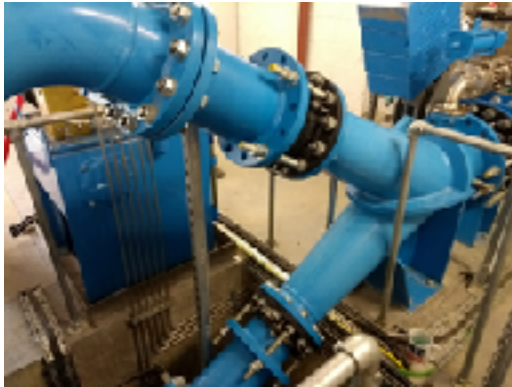
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Turbine House Complete



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Energy conversion Turbine and generator



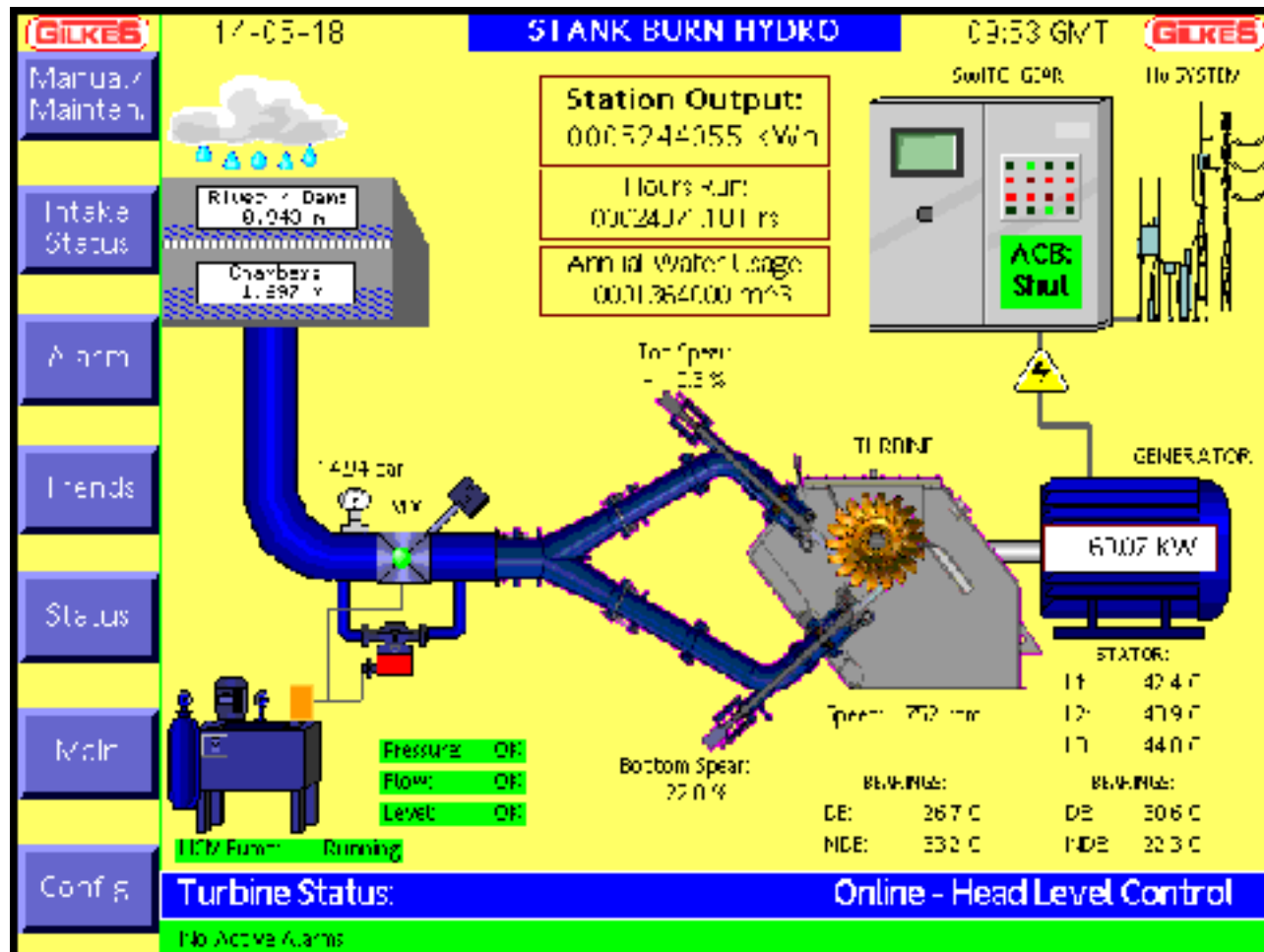
Water



Electricity

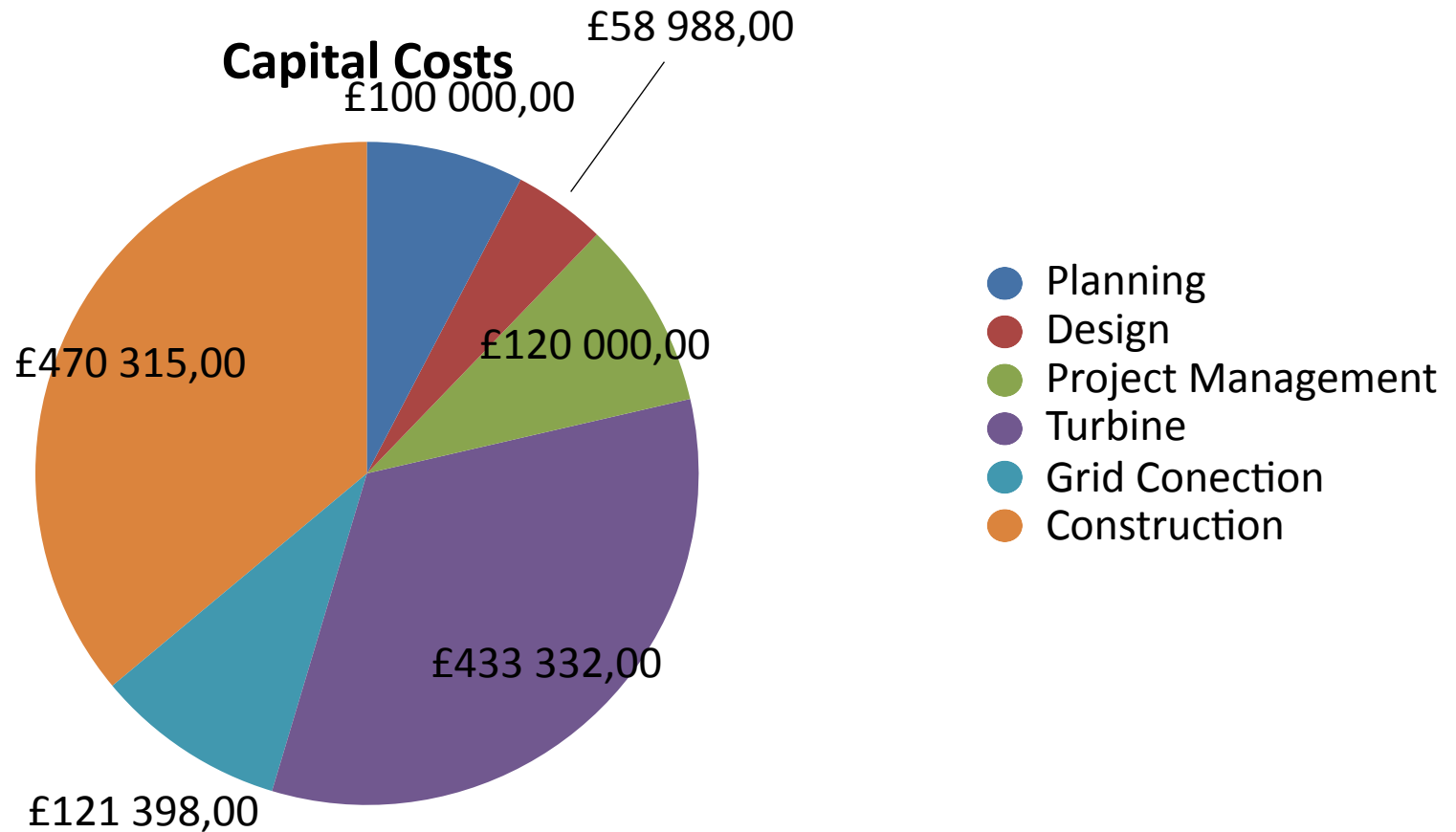
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Control System Schematic



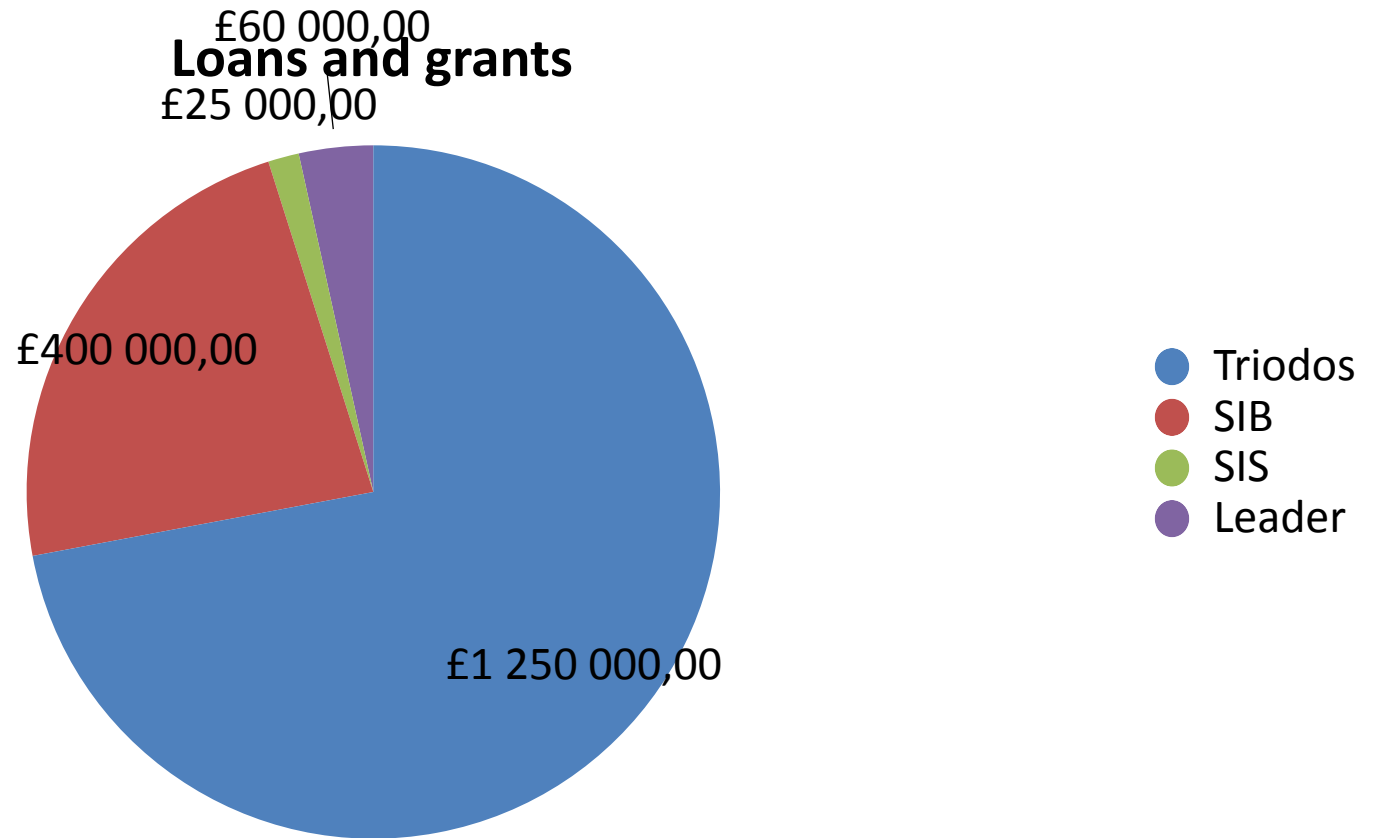
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Where we spent money



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Funders



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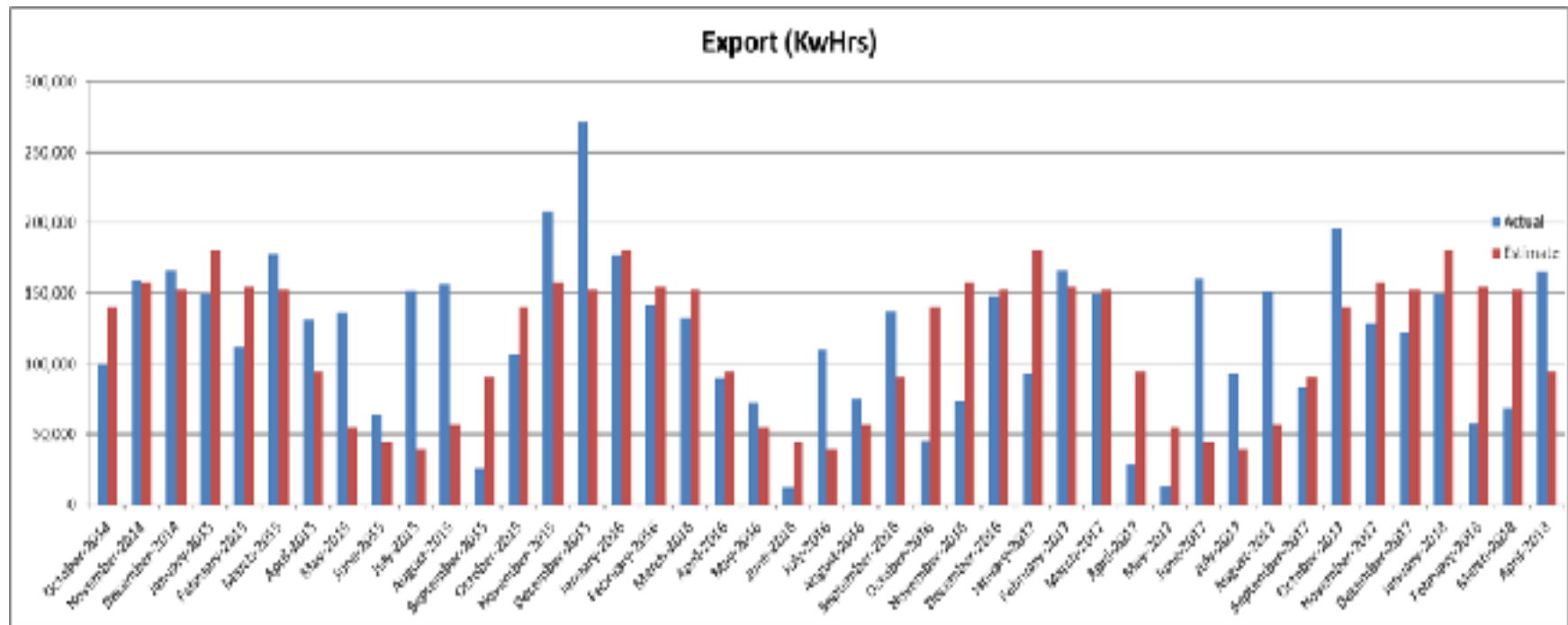
Actual Performance



Year	Actual MwHrs	Export	FIT	Total Income
2015	862	£44,219.43	£143,664.91	£187,884.34
2016	1702	£103,455.26	£287,121.53	£390,576.79
2017	1171	£68,618.76	£202,516.44	£271,135.20
2018	1182	£177,459.19	£204,373.13	£381,832.32
Total	4917	£393,752.64	£837,676.00	£1,231,428.65

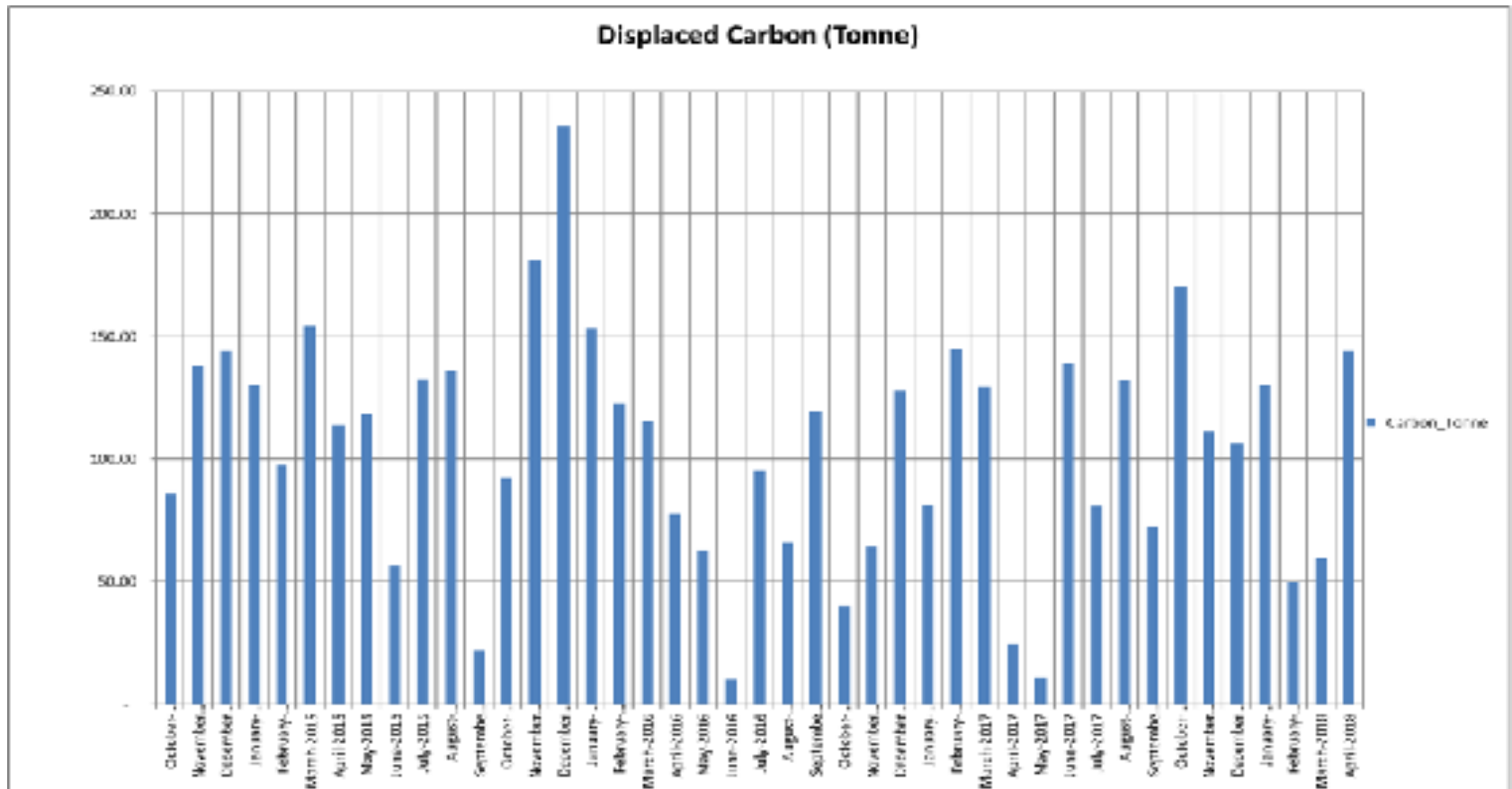
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Estimate v's Actual KwHrs



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Carbon Displacement 4,482 tonnes



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How Callander Community Development Trust awards grants



CALLANDER COMMUNITY DEVELOPMENT TRUST

- https://incallander.co.uk/ccdt_hydrodescription
- [hydrofund_applicationguidelines.pdf](#)
- [hydrofund_applicationform.pdf](#)

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Support so far



- ✓ Town Co-Ordinator
- ✓ Summerfest - Events
- ✓ Craigard Club - Transport
- ✓ CYP - Youth Club
- ✓ Greener Callander - Baskets
- ✓ MCLC - Childcare Service
- ✓ MCLC - Indoor Play 0-8
- ✓ CBC – Lawn Mower
- ✓ CPPC – Playground Benches
- ✓ CKH - Kitchen Refurb
- ✓ McL High – New PCs
- ✓ Clanranald – Toilet Refurb
- ✓ Round Tab – Highland Games
- ✓ Jazz Festival – PA System
- ✓ Trust Housing – IT Equipment
- ✓ McL High Pipe Band – Drum
- ✓ Winterfest – Events
- ✓ CAOS – Sound System
- ✓ FEL – Active Travel Hub
- ✓ Trossachs Mobility – Rent
- ✓ Round Tab – Memorial Board

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Callander Landscape Partnership



- **£1.43million Lottery funding**
- **Improve access and restoration of the Victorian Walkway at the Falls of Leny**
- **improving and conserving the area's natural heritage**
- **exploring the past through cultural heritage and archaeology**
- **creating a cycling and walking network**
- **enhancing visitor interpretation to encourage people to make the most of getting active in the outdoors.**

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Community Investment



- Paid to date £160K
- Committed forward £150k Over next 3 Years
- Expected loan repayment ~ 2024
- FIT payments end 2034

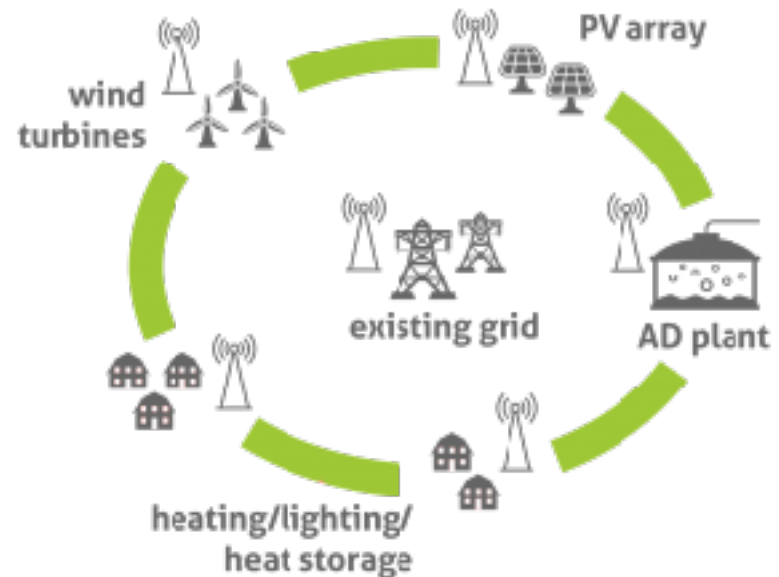
10 Years ££££'s

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Future developments



- **Forest holidays** private wire scheme
- **Scottish Water Horizons** - wastewater heat pump – schools, leisure centre & fuel poverty
- **Smart Fintry**



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Central Electricity Generating Board



Build power stations over coal fields

Build same designs – one spares list

National Grid created to fit coal fields

Age 16 - £4 3s. 2d. per week

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Useful web sites



[https://www.nationalgrid.com/sites/default/files/documents/](https://www.nationalgrid.com/sites/default/files/documents/14782_NG_Summer%20Outlook_2018.pdf)

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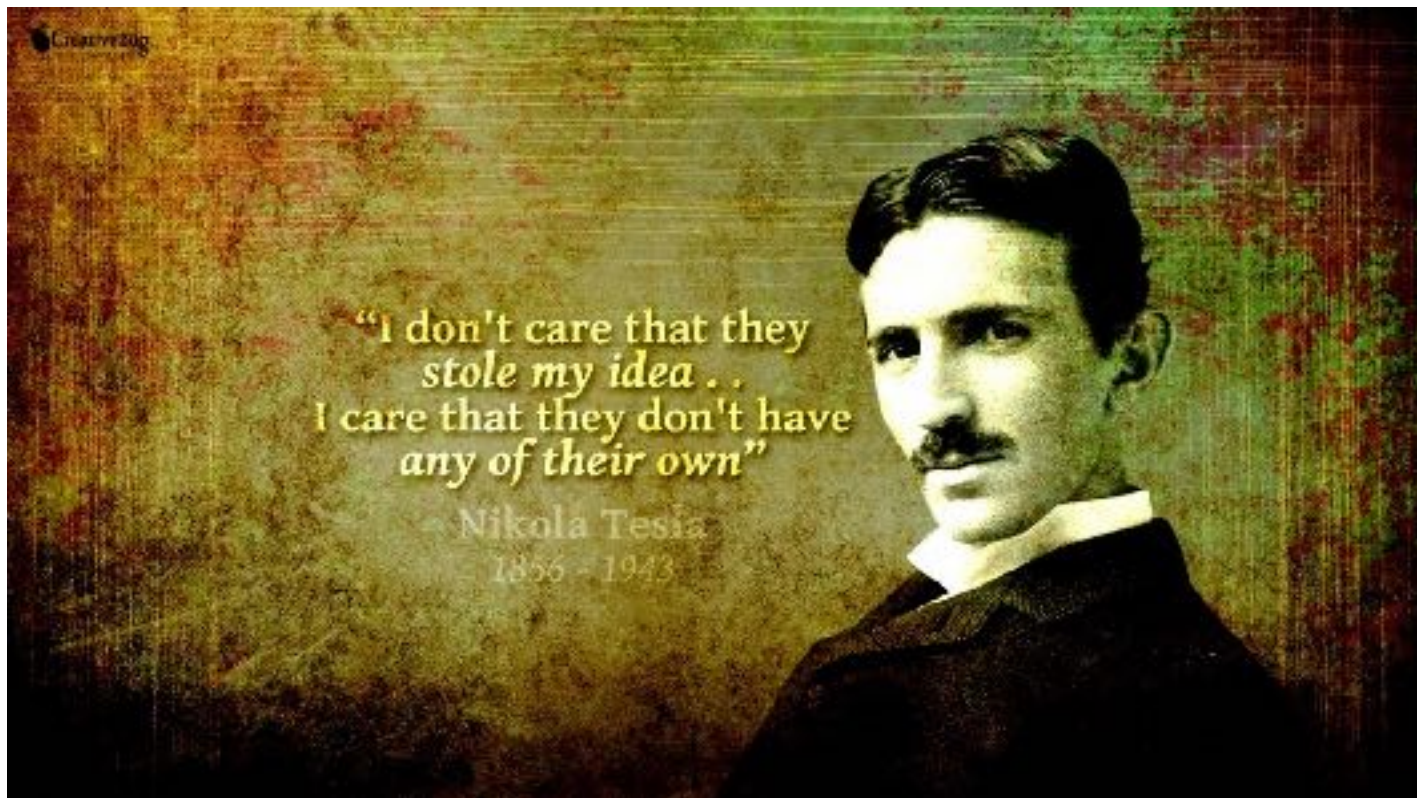
[https://www.ssepd.co.uk/](https://www.ssepd.co.uk/GenerationAvailabilityMap/?mapareaid=2)

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<http://smartfintry.org.uk/wp-content/uploads/2018/04/Appendix-2-SMART-Fintry-Lessons-Learned-report.pdf>

<https://www.communitycompanies.co.uk/industrial-and-provident-societies>

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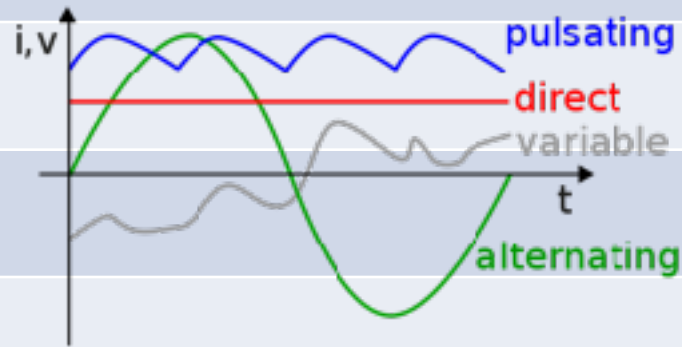
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Edison used DC, employed Tesla on promise of \$ 1.1 M success fee.



Westinghouse developed AC



Battle of the currents

"Cruel and unusual punishment" Poor William Kemmler



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